

## Vol. 54. INDEX

### Fasc. 1. (January 1962.)

	Pag.
Different RNA Fractions during Cell Growth and Synchronous Division in Mass Cultures of Tetrahymena Pyriformis. By E. CHRISTENSSON . . . . .	1
Tactile Pathways from the Hindlimb to the Cerebral Cortex in Cat. By U. NORRSELL and P. VOORHOEVE . . . . .	9
Distribution of Extra- and Intrathoracic Pressure Variations in Rabbits Exposed to Air Shock Waves. By C.-J. CLEMEDSON and A. JÖNSSON . . .	18
The Effects of D- and L-lactate and Osmotic Diuretics on Uric Acid Clearance in the Rabbit. By J. V. MÖLLER . . . . .	30
Comparison of Ascending Spinal Tracts Activated by Group I Muscle Afferents in the Phalanger, Rabbit, and Cat. By F. MAGNI and O. OSCARSSON . . . . .	37
Principal Organization of Coarse-Fibred Ascending Spinal Tracts in Phalanger, Rabbit, and Cat. By F. MAGNI and O. OSCARSSON . . . . .	53
Effects of Posture on Alveolar-Arterial CO <sub>2</sub> and O <sub>2</sub> Differences and on Alveolar Dead Space in Man. By H. BJURSTEDT, C. M. HESSER, G. LILJESTRAND and G. MATELL . . . . .	65
A Method for the Determination of Normetanephrine in Brain. By A. CARLSSON and M. LINDQVIST . . . . .	83
In-Vivo Decarboxylation of $\alpha$ -Methyl DOPA and $\alpha$ -Methyl Metatyrosine. By A. CARLSSON and M. LINDQVIST . . . . .	87
Pigment Position and Light Sensitivity in the Compound Eye of Noctuid Moths. By C. G. BERNHARD and D. OTTOSON . . . . .	95

### Fasc. 2. (February 1962.)

In Vivo Incorporation of <sup>59</sup> Fe into Nonhem Iron and Hemoglobin of Red Blood Cells. By I. FALBE-HANSEN and K. LOTHE . . . . .	97
The Nature of the Neuromuscular Block Produced by Neomycine. By D. ELMQVIST and J.-O. JOSEFSSON . . . . .	105
Changes in Kidney Leucine Aminopeptidase of Rats after Birth. By V. K. HOPSU and S. RUPONEN . . . . .	111
The Effect of Lowering the Pulse Pressure in the Carotid Arteries on the Cardiac Output in the Cat. By A. C. GROOM, B. M. A. LÖFVING, S. ROWLANDS and H. W. THOMAS . . . . .	116
Hypoexemia in Man Induced by Prolonged Acceleration. By P.-O. BARR	128
The Effect of Respiratory Acidosis upon the Peripheral Vascular Reactivity to Noradrenaline in the Cat. By S. BYGDAMAN and U. S. VON EULER . .	138
Die Darstellung von Häm in aus kleinen Blutmengen (0.1—0.2 ml). By A. FORSSBERG and B. TRIBUKAIT . . . . .	147

	Pag.
Bestimmung der Lebenszeit der nach akuter Blutung gebildeten Rattenerythrozyten ( $C^{14}$ -Hämin). By A. FORSSBERG and B. TRIBUKAIT	152
Central Control of Cold Defense Mechanisms and the Release of "Endopyrogen" in the Goat. By H. T. ANDERSEN, B. ANDERSSON and C. GALE	159
Movements Evoked from the Region of the Caudate Nucleus in Cats. By A. MOSFELDT LAURSEN	175
Inhibition Evoked from the Region of the Caudate Nucleus in Cats. By A. MOSFELDT LAURSEN	185
Activation of the Thyroid Gland by Cooling of the Pre-optic Area in the Goat. By B. ANDERSSON, L. EKMAN, C. C. GALE and J. W. SUNDSTEN	191

### Fasc. 3-4. (March—April 1962.)

The Effect of Small Doses of Alcohol on the "Optokinetic Fusion Limit". By L.-H. BLOMBERG and A. WASSÉN	193
Phosphorylase Activity of Smooth Muscle. By E. MOHME-LUNDHOLM	200
Vasomotor Nerve Activity and Oxygen Uptake in Skeletal Muscle of the Anesthetized Cat. By S. ROSELL and B. UVNÄS	209
The Influence of Sympathetic Adrenergic Vasoconstrictor Nerves on Transport of Diffusible Solutes from Blood to Tissues in Skeletal Muscle. By E. U. RENKIN and S. ROSELL	223
Effects of Different Types of Vasodilator Mechanisms on Vascular Tonus and on Transcapillary Exchange of Diffusible Material in Skeletal Muscle. By E. U. RENKIN and S. ROSELL	241
Functional Organization of the Ventral Spino-Cerebellar Tract in the Cat. IV. Identification of Units by Antidromic Activation from the Cerebellar Cortex. By A. LUNDBERG and O. OSCARSSON	252
Two Ascending Spinal Pathways in the Ventral Part of the Cord. By A. LUNDBERG and O. OSCARSSON	270
The Metabolism of 1- $C^{14}$ -Palmitic Acid in Rats with Ethionine-Induced Fatty Livers. By T. OLIVECRONA	287
The Metabolism of 1- $C^{14}$ -Palmitic Acid in the Rat. By T. OLIVECRONA	295
Inhibition by Ganglionic Blocking Agents of the Motor Response of the Isolated Guinea-Pig Vas Deferens to Hypogastric Nerve Stimulation. By N. O. SJÖSTRAND	306
The Behaviour of the Cerebral Circulation during Muscular Exercise. By S. HEDLUND, G. NYLIN and O. REGNSTRÖM	316
Regional Blood Flow of the Cerebral Cortex Determined by Krypton. By D. H. INGVAR and N. A. LASSEN	325
Abnormal Blood-brain Passage of a Quaternary Phenothiazine Derivative ( $S^{35}$ -labelled Aprobil®) Induced by Chemical Agents. By E. HANSSON and O. STEINWALL	339

Pag.		Pag.
	Storage of Human Red Blood Cells. I. The Effect of ACD Solution on Breakdown of Glucose. By C.-H. DE VERDIER and J. KILLANDER . . . .	346
152	Urinary Excretion of Catecholamines in Endotoxin-induced Fever in Rabbits. By N. SERAFIMOV . . . . .	354
159	Separation of Chylomicron Lipids from Serum Lipoproteins on Hydroxyl Apatite Columns. By B. BORGSTRÖM, C. NAITO and P. WLODAWER . . .	359
175	Intramuscular, Rectal and Oesophageal Temperature During Exercise. By E. ÄIKÄS, M. J. KARVONEN, P. PIIRONEN and R. RUOSTENOJA . . . . .	366
185	A Tonometer for the Recording of Tenseness Variations in the Kidney in Situ. By A. ÅSTRÖM, U. SAMELIUS and T. STRANDELL . . . . .	371
191	Independent Sympathetic Vasoconstrictor Innervation of Arterioles and Precapillary Sphincters. By E. U. RENKIN and S. ROSELL . . . . .	381
	Histochemical Localization at the Cellular Level of Hypothalamic Noradrenaline. By A. CARLSSON, B. FALCK, N.-Å. HILLARP and A. TÖRP . .	385
193		
200	Supplementum 186. Differential Supraspinal Control of Synaptic Actions Evoked by Volleys in the Flexion Afferents in Alpha Motoneurons. By B. HOLMQVIST and A. LUNDBERG.	
209	Supplementum 187. Hemodynamics of the Human Ascending Aorta as Studied by Means of a Differential Pressure Technique. By B. RUDEWALD.	
223	Supplementum 188. Interrelations between Variables in Pulmonary Gas Exchange. By S. NISSEN-MEYER.	
241		
252		
270		
287		
295		
306		
316		
325		
339		

# INDEX AUCTORUM

	Pag.
ÄIKES, E., M. J. KARVONEN, P. PIIRONEN and R. RUOSTEENOJA, Temperature During Exercise . . . . .	366
ANDERSEN, H. T., B. ANDERSSON and C. GALE, Cold Defense Mechanisms	159
ANDERSSON, B., H. T. ANDERSEN and C. GALE, Cold Defense Mechanisms	159
ANDERSSON, B., L. EKMAN, C. C. GALE and J. W. SUNDSTEN, Activation of the Thyroid Gland by Cooling . . . . .	191
ÅSTRÖM, A., U. SAMELIUS and T. STRANDELL, A Kidney Tonometer . . . . .	371
BARR, P.-O., Hypoxemia in Man Induced by Prolonged Acceleration . . . . .	128
BERNHARD, C. G. and D. OTTOSON, Pigment Position and Light Sensitivity	95
BJURSTEDT, H., C. M. HESSER, G. LILJESTRAND and G. MATELL, Alveolar-Arterial CO <sub>2</sub> and O <sub>2</sub> Differences . . . . .	65
BLOMBERG, L.-H. and A. WASSÉN, Alcohol on Optokinetic Fusion Limit . . . . .	193
BORGSTRÖM, B., C. NAITO and P. WLODAWER, Separation of Serum and Chyle Lipoproteins . . . . .	359
BYGDEMAN, S. and U. S. VON EULER, Respiratory Acidosis and Vascular Reactivity . . . . .	138
CARLSSON, A. and M. LINDQVIST, Normetanephrine in Brain . . . . .	83
CARLSSON, A. and M. LINDQVIST, Decarboxylation of $\alpha$ -Methyl Amino Acids . . . . .	87
CARLSSON, A., B. FALCK, N.-Å. HILLARP and A. TORP, Localization of Hypothalamic Noradrenaline . . . . .	385
CHRISTENSSON, E., RNA in Tetrahymena Cultures . . . . .	1
CLEMEDSON, C.-J. and A. JÖNSSON, Distribution of Shock Wave Pressures in Rabbits . . . . .	18
DE VERDIER, C.-H. and J. KILLANDER, Storage of Human Red Blood Cells	346
EKMAN, L., B. ANDERSSON, C. C. GALE and J. W. SUNDSTEN, Activation of the Thyroid Gland by Cooling . . . . .	191
ELMQVIST, D. and J.-O. JOSEFSSON, Neuromuscular Block by Neomycine	105
EULER, U. S. v. and S. BYGDEMAN, Respiratory Acidosis and Vascular Reactivity . . . . .	138
FALBE-HANSEN, I. and K. LOTHE, In Vivo Incorporation of <sup>59</sup> Fe into Non-hem Iron . . . . .	97
FALCK, B., A. CARLSSON, N.-Å. HILLARP and A. TORP, Localization of Hypothalamic Noradrenaline . . . . .	385
FORSSBERG, A. and B. TRIBUKAIT, Mikromethode zur Hämindarstellung . . . . .	147
FORSSBERG, A. and B. TRIBUKAIT, Erythrozytenlebenszeit bei Blutungsanämie . . . . .	152
GALE, C., H. T. ANDERSEN and B. ANDERSSON, Cold Defense Mechanisms	159
GALE, C. C., B. ANDERSSON, L. EKMAN and J. W. SUNDSTEN, Activation of the Thyroid Gland by Cooling . . . . .	191
GROOM, A. C., B. M. A. LÖFVING, S. ROWLANDS and H. W. THOMAS, Baroreceptors and Cardiac Output . . . . .	116

HANSSON, E. and O. STEINWALL, Blood-brain Passage of Aprobit . . . . .	339
HEDLUND, S., G. NYLIN and O. REGNSTRÖM, Cerebral Circulation during Exercise . . . . .	316
HESSER, C.-M., H. BJURSTEDT, G. LILJESTRAND and G. MATELL, Alveolar Arterial CO <sub>2</sub> and O <sub>2</sub> Differences . . . . .	65
HILLARP, N.-Å., A. CARLSSON, B. FALCK and A. TORP, Localization of Hypothalamic Noradrenaline . . . . .	385
HOPSU, V. K. and S. RUPONEN, Kidney Leucine Aminopeptidase . . . . .	111
INGVAR, D. H. and N. A. LASSEN, Cortical Blood Flow Determined by KR <sup>85</sup> . . . . .	325
JÖNSSON, A. and C.-J. CLEMEDSON, Distribution of Shock Wave Pressures in Rabbits . . . . .	18
JOSEFSSON, J.-O. and D. ELMQVIST, Neuromuscular Block by Neomycine . . . . .	105
KARVONEN, M. J., E. ÄIKÄS, P. PIIRONEN and R. RUOSTENOJA, Temperature During Exercise . . . . .	366
KILLANDER, J. and C.-H. DE VERDIER, Storage of Human Red Blood Cells . . . . .	346
LASSEN, N. A. and D. H. INGVAR, Cortical Blood Flow Determined by KR <sup>85</sup> . . . . .	325
LAURSEN, A. M., Movements Evoked from Caudate Nucleus . . . . .	175
LAURSEN, A. M., Inhibition Evoked from Caudate Nucleus . . . . .	185
LILJESTRAND, G., H. BJURSTEDT, C. M. HESSER and G. MATELL, Alveolar Arterial CO <sub>2</sub> and O <sub>2</sub> Differences . . . . .	65
LINDQVIST, M. and A. CARLSSON, Normetanephrine in Brain . . . . .	83
LINDQVIST, M. and A. CARLSSON, Decarboxylation of $\alpha$ -Methyl Amino Acids . . . . .	87
LÖFVING, B. M. A., A. C. GROOM, S. ROWLANDS and H. W. THOMAS, Baroreceptors and Cardiac Output . . . . .	116
LOTHE, K. and I. FALBE-HANSEN, In Vivo Incorporation of <sup>59</sup> Fe into Non-hem Iron . . . . .	97
LUNDBERG, A. and O. OSCARSSON, Ventral Spino-Cerebellar Tract. IV. . . . .	252
LUNDBERG, A. and O. OSCARSSON, Two Ascending Pathways . . . . .	270
MAGNI, F. and O. OSCARSSON, Tracts Activated by Group I Afferents . . . . .	37
MAGNI, F. and O. OSCARSSON, Organization of Ascending Tracts . . . . .	53
MATELL, G., H. BJURSTEDT, C.-M. HESSER and G. LILJESTRAND, Alveolar Arterial CO <sub>2</sub> and O <sub>2</sub> Differences . . . . .	65
MOHME-LUNDHOLM, E., Phosphorylase Activity of Smooth Muscle . . . . .	
MÖLLER, J. V., Lactate on Uric Acid Clearance . . . . .	30
NAITO, C., B. BORGSTRÖM and P. WLODAWER, Separation of Serum and Chyle Lipoproteins . . . . .	359
NORRSELL, U. and P. VOORHOEVE, Tactile Pathways to Cerebral Cortex . . . . .	9
NYLIN, G., S. HEDLUND and O. REGNSTRÖM, Cerebral Circulation during Exercise . . . . .	316
OLIVECRONA, T., Plasma FFA and Ethionine Fatty Liver . . . . .	287
OLIVECRONA, T., Palmitic and Metabolism . . . . .	295

	Pag.
OSCARSSON, O. and A. LUNDBERG, Ventral Spino-Cerebellar Tract . . . . .	252
OSCARSSON, O. and A. LUNDBERG, Two Ascending Pathways . . . . .	270
OSCARSSON, O. and F. MAGNI, Tracts Activated by Group I Afferents . . .	37
OSCARSSON, O. and F. MAGNI, Organization of Ascending Tracts . . . . .	53
OTTOSON, D. and C. G. BERNHARD, Pigment Position and Light Sensitivity	95
PIIRONEN, P., E. ÄIKÄS, M. J. KARVONEN and R. RUOSTEENOJA, Tempera- ture During Exercise . . . . .	366
REGNSTRÖM, O., S. HEDLUND and G. NYLIN, Cerebral Circulation during Exercise . . . . .	316
RENKIN, E. U. and S. ROSELL, Vasoconstrictor Nerves and Transcapillary Diffusion . . . . .	223
RENKIN, E. U. and S. ROSELL, Vasodilators in Muscle . . . . .	241
RENKIN, E. U. and S. ROSELL, Innervation of Arterioles and Sphincters .	381
ROSELL, S. and E. U. RENKIN, Vasoconstrictor Nerves and Transcapillary Diffusion . . . . .	223
ROSELL, S. and E. U. RENKIN, Vasodilators in Muscle . . . . .	241
ROSELL, S. and E. U. RENKIN, Innervation of Arterioles and Sphincters .	381
ROSELL, S. and B. UVNÄS, Oxygen Uptake in Muscle . . . . .	209
ROWLANDS, S., A. C. GROOM, B. M. A. LÖFVING and H. W. THOMAS, Baro- receptors and Cardiac Output . . . . .	116
RUOSTEENOJA, R., E. ÄIKÄS, M. J. KARVONEN and P. PIIRONEN, Tempera- ture During Exercise . . . . .	366
RUPONEN, S. and V. K. HOPUS, Kidney Leucine Aminopeptidase . . . . .	111
SAMELIUS, U., A. ÅSTRÖM and T. STRANDELL, A Kidney Tonometer . . .	371
SERAFIMOV, N., Catecholamine Excretion in Fever . . . . .	354
SJÖSTRAND, N. O., Inhibition by Ganglionic Blockers . . . . .	306
STEINWALL, O. and E. HANSSON, Blood-brain Passage of Aprobite . . . . .	339
STRANDELL, T., A. ÅSTRÖM and U. SAMELIUS, A Kidney Tonometer . . .	371
SUNDSTEN, J. W., B. ANDERSSON, L. EKMAN and C. C. GALE, Activation of the Thyroid Gland by Cooling . . . . .	191
THOMAS, H. W., A. C. GROOM, B. M. A. LÖFVING and S. ROWLANDS, Baro- receptors and Cardiac Output . . . . .	116
TORP, A., A. CARLSSON, B. FALCK and N.-Å. HILLARP, Localization of Hypothalamic Noradrenaline . . . . .	385
TRIBUKAIT, B. and A. FORSSBERG, Mikromethode zur Hämindarstellung .	147
TRIBUKAIT, B. and A. FORSSBERG, Erythrozytenlebenszeit bei Blutungs- anämie . . . . .	152
UVNÄS, B. and S. ROSELL, Oxygen Uptake in Muscle . . . . .	209
VOORHOEVE, P. and U. NORRSELL, Tactile Pathways to Cerebral Cortex .	9
WASSÉN, A. and L.-H. BLOMBERG, Alcohol on Optokinetic Fusion Limit .	193
WLODAWER, P., B. BORGSTRÖM and C. NAITO, Separation of Serum and Chyle Lipoproteins . . . . .	359

Pag.

252

270

37

53

95

366

316

223

241

381

223

241

381

209

116

366

111

371

354

306

339

371

191

116

385

147

152

209

9

193

359